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| EXAMINER |
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TSOY, ELENA

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| ART UNIT | PAPER NUMBER |
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1762

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10/01/2007

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/722,414

Applicant(s)

SCHMITT ET AL.

Examiner

Elena Tsoy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 September 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 and 19-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Response to Amendment

Amendment filed on September 6, 2007 has been entered. Claims 23-25 have been cancelled. Claims 1-22 are pending in the application. Claim 18 is withdrawn from consideration as directed to a non-elected invention.

Claim Objections

1. Objection to claim 2 and 15 because of the informalities has been withdrawn due to amendment.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Rejection of claim 13 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention has been withdrawn due to amendment.
4. Claims 1-17, and 19-22 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites a phrase "two or more continuous stirred tank reactors in series" which renders the claim indefinite because meaning of the phrase is not clear from the claim or the Applicants disclosure. However, it seems that "continuous stirred tank" is a term used in the art for carrying out "a continuous process in stirred tank reactors connected in series".

Double Patenting

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29

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USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 1-17, 19-22 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 5, 7, 10, 11, 13, 17 of U.S. Patent No. 6,878,759 in view of Sielcken et al (US 5585524) and Jenczewski et al (US 5656757). Although the conflicting claims are not identical, they are not patentably distinct from each other because they relate to the same subject matter except for the process being continuous and being carried out in a series of reactors. However, as it is well settled, continuous process verses batch is not considered to be an act of invention. A continuous process using a stirred tank reactor (CSTR) connected in series would be obvious in view of Sielcken et al and Jenczewski et al as will be discussed below.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-17, and 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smigerski et al (US 6,348,522) in view of Sielcken et al (US 5585524) and Jenczewski et al (US 5656757).

Smigerski et al '522 are applied here for the same reasons as set forth in paragraph 9 of the Office Action mailed on 6/7/2007. Smigerski et al fail to teach that a continuous process is carried out using a stirred tank reactor (CSTR) connected in series (Claim 1).

Sielcken et al teach that a batchwise process can be carried out in a stirred vessel; a *continuous* process can be carried out using a stirred tank reactor (CSTR), a tubular reactor, a non-stirred bubble column and an internal or external gas-lift loop reactor (See column 5, lines 61-65).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have carried out a continuous process of Smigerski et al '522 in a stirred tank reactor (CSTR) instead of a tubular reactor since Sielcken et al teach that a continuous process can be carried out using a CSTR or a tubular reactor.

Smigerski et al '522 in view of Sielcken et al fail to teach that two or more reactors connected in series (a reactor system) are used (Claim 1). Obviously, if different types of filler-containing rubber powders or a doubled amount of rubber powder should be produced, two or more reactors in series (a reactor system) would be used, e.g. each reactor for each type of filler-containing rubber powder.

It is held that mere duplication of parts has no patentable significance unless a new and unexpected result is produced. See MPEP 2144.04. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided two or more CSTR in series (a reactor system) in Smigerski et al '522 in view of Sielcken et al with the expectation of providing the desired at least two types of filler-containing rubber powders or a doubled amount of rubber powder depending on particular customer request.

One of ordinary skill in the art would have reasonable expectation of success in using two or more CSTR in series since it is known in the art to carry out a continuous process in at least three stirred tank reactors connected in series, as evidenced by Jenczewski et al showing that for a continuous process, a stirred tank reactor may be used, preferably at least three stirred tank reactors connected in series (See column 4, lines 28-30).

9. Claims 1-17, 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smigerski et al (US 4,788,231) in view of Sielcken et al and Jenczewski et al.

Smigerski et al '231 are applied here for the same reasons as set forth in paragraph 10 of the Office Action mailed on 6/7/2007. Smigerski et al '231 teach that a filler suspension and rubber latex are mixed intimately in propeller mixer (claimed stirred reactor) (See column 4, lines 27-33). Smigerski et al '231 further teach that the process can be carried out either discontinuously in a stirred reactor (See column 4, lines 27-39) or continuously (See column 4,

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lines 50-51). Obviously, in a continuous process filler and rubber latex would be added through *separate* feedlines. Smigerski et al '231 do not expressly teach that the continuous process can be carried out in stirred reactors connected in series (Claim 1).

Sielcken et al and Jenczewski et al are applied here for the same reasons as above.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have carried out a continuous process of Smigerski et al '231 in a stirred tank reactor (CSTR) since Sielcken et al teach that a continuous process can be carried out using a CSTR.

Obviously, if different types of filler-containing rubber powders or a doubled amount of rubber powder should be produced, two or more reactors in series (a reactor system) would be used, e.g. each reactor for each type of filler-containing rubber powder.

It is held that mere duplication of parts has no patentable significance unless a new and unexpected result is produced. See MPEP 2144.04. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided two or more CSTR in series (a reactor system) in Smigerski et al '231 in view of Sielcken et al with the expectation of providing the desired at least two types of filler-containing rubber powders or a doubled amount of rubber powder depending on particular customer request.

One of ordinary skill in the art would have reasonable expectation of success in using two or more CSTR in series since it is known in the art to carry out a continuous process in at least three stirred tank reactors connected in series, as evidenced by Jenczewski et al showing that for a continuous process, a stirred tank reactor may be used, preferably at least three stirred tank reactors connected in series (See column 4, lines 28-30).

10. Claims 1-17, and 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goerl et al (US 20020091190) in view of Sielcken et al and Jenczewski et al.

Goerl et al are applied here for the same reasons as set forth in paragraph 11 of the Office Action mailed on 6/7/2007.

Goerl et al teach that the process of their invention may be carried out either batchwise in stirred reactors (See Fig. 1) or else continuously (See P47). Goerl et al do not expressly teach that the continuous process can be carried out in stirred reactors connected in series (Claim 1).

Sielcken et al and Jenczewski et al are applied here for the same reasons as above.

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to have carried out a continuous process of Goerl et al in a stirred tank reactor (CSTR) since Sielcken et al teach that a continuous process can be carried out using a CSTR.

Obviously, if different types of filler-containing rubber powders or a doubled amount of rubber powder should be produced, two or more reactors in series (a reactor system) would be used, e.g. each reactor for each type of filler-containing rubber powder.

It is held that mere duplication of parts has no patentable significance unless a new and unexpected result is produced. See MPEP 2144.04. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided two or more CSTR in series (a reactor system) in Goerl et al in view of Sielcken et al with the expectation of providing the desired at least two types of filler-containing rubber powders or a doubled amount of rubber powder depending on particular customer request.

One of ordinary skill in the art would have reasonable expectation of success in using two or more CSTR in series since it is known in the art to carry out a continuous process in at least three stirred tank reactors connected in series, as evidenced by Jenczewski et al showing that for a continuous process, a stirred tank reactor may be used, preferably at least three stirred tank reactors connected in series (See column 4, lines 28-30).

Response to Arguments

11. Applicant's arguments with respect to amended claim 1 have been considered but are moot in view of the new ground(s) of rejection.

Applicants argue that the method of Smigerski-231 is fundamentally different than the process of independent Claim 1. According to Smigerski-231, the amount of carbon black filler is divided, and the second amount of carbon black is to be added to the base particles of powdered rubber after the end of *precipitation* (see Smigerski-23 at column 6, Examples 1 to 4).

After passing through the usual viscosity increase, the precipitation was completed within approximately 10 seconds after adding the acid. With further stirring, a suspension of 157 g of water and 10 g of the aforementioned carbon black was metered in. Smigerski-231 at column 6, lines 31-36.

Thus, the second addition of carbon black takes place only after precipitation of the powdered rubber. By this method the carbon black is not anchored in the peripheral shell, but instead it creates a kind of powdering effect. At first, these products are also free-flowing. However, over the long term the outer layer of carbon black is removed by friction, etc., and so the tackiness increases. Furthermore, in Smigerski-231 carbon black migrates from the interior of the particles to the peripheral zone due to removal of moisture. Consequently, these products are not reproducible with regards to the carbon black content, and over the long term they become tackier than the inventive products. Because Smigerski-231 fails to suggest the independent Claim 1 limitations of "continuously and simultaneously feeding an aqueous filler mixture comprising at least one filler, and an aqueous rubber emulsion or latex into a reactor system through separate feedlines to coagulate rubber on the surface of the filler and form a precipitation suspension of filled rubber granules", the claims are further patentably distinguishable over Smigerski- 231.

The Examiner respectfully disagrees with this argument.

First of all, claim 1 does not exclude addition of filler after the end of precipitation.

Second, it is noted that the features upon which applicant relies (i.e., limitations that *the carbon black is not anchored in the peripheral shell; the products are not reproducible with regards to the carbon black content, and over the long term they become tackier than the inventive products*) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Third, Smigerski et al '231 teach that a filler suspension and rubber latex are mixed intimately in propeller mixer (claimed stirred reactor) (See column 4, lines 27-33). Smigerski et al '231 further teach that the process can be carried out either discontinuously in a stirred reactor (See column 4, lines 27-39) or continuously (See column 4, lines 50-51). Obviously, in a *continuous* process filler and rubber latex would be added through *separate* feedlines.

Thus, in contrast to Applicants argument, Smigerski et al '231 do suggest the independent Claim 1 limitations of "continuously and simultaneously feeding an aqueous filler mixture comprising at least one filler, and an aqueous rubber emulsion or latex into a reactor system through separate feedlines to coagulate rubber on the surface of the filler and form a precipitation suspension of filled rubber granules".

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elena Tsoy whose telephone number is 571-272-1429. The examiner can normally be reached on Monday-Thursday, 9:00AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on 571-272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Elena Tsoy, Ph.D.
Primary Examiner
Art Unit 1762

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PRIMARY EXAMINER



September 20, 2007